WORKING THE LAND

SPRING 2022

A SPECIAL SUPPLEMENT TO THE MARION CHRONICLE-TRIBUNE, FRANKFORT TIMES, PERU TRIBUNE, WABASH PLAIN DEALER AND HUNTINGTON HERALD-PRESS



Photo by Rob Burgess / Plain Dealer

Higher input costs have consistently been the number one concern identified by farmers over the past six months, according to results from the Ag Economy Barometer survey.

Uncertainty in the sector reflected in ag economy barometer

By ROB BURGESS

Wabash Plain Dealer Editor

There are concrete reasons for optimism for this year's crop for farmers, yet a multitude of factors have many trending towards pessimism.

During a recent virtual presentation to the Purdue University Wabash County Extension Office, Purdue University Center for Commercial Agriculture director Jim Mintert, Ph.D. broke down the data regarding the Purdue University/CME Group Ag Economy Barometer.

The Ag Economy Barometer is calculated each month from 400 U.S. agricultural producers' responses to a telephone survey.

"It's not the same people every month, but they are people that are producing essentially about the same commodity mix every month. So, it's a pretty representative sample," said Mintert.

The most recent survey was conducted between Feb. 14 to 18, "days before Russia's invasion of Ukraine."

Mintert said farmer sentiment continued "to fluctuate month-to-month."

Mintert said the Ag Economy Barometer peaked last winter and early spring, peaking in April 2021 at a figure of 174. The Ag Economy Barometer rose 6 points to a reading of 125 in February, "a mirror image of the previous month." The Index of Current Conditions was down 1 point to a reading of 132, while the Index of Future Expectations improved 10 points to a reading of 122. The Barometer survey.

Farm Financial Performance Index remained unchanged in February at a reading of 83.

strength of commodity prices.

Mintert said since then, they have "seen a big decline."

weighed on things," said Mintert. Mintert said this was tied to uncertainty in the agricultural sector, especially concerning "some of the things that have taken place on

the cost side." "As we got into the fall, the 2020 crop year was pretty good. Some were sold at strong they thought it was a good or bad time to

prices," said Mintert. Mintert said despite this fact, they were

"still picking up the weak sentiment." Mintert said the sharp drop in the index, down 27 percent from late 2021 to 2022 "indicates producers expect financial perfor-

mance in 2022 to be worse than in 2021."

"The financial index is generated based upon producers' responses to whether they expect their farm's current financial performance to be better than, worse than or about the same as the previous year," said Minert. 'These survey responses suggest that con-

cerns about the spike in production costs and supply chain issues continue to mostly outweigh the impact of the commodity price rally that's been underway this winter.'

Mintert said higher input costs have consistently been the number one concern identified by farmers over the past six months, according to results from the Ag Economy

"To gain additional insight into the concerns of producers, this month respondents Mintert said this was partly because of the were provided with a more detailed set of possible responses when answering this question," said Mintert.

While a majority still consider input costs "Weaker expectations on the future have as their number one concern (47 percent), it was followed by lower output prices (16 percent), environmental policy (13 percent), farm policy (9 percent), climate policy (8 percent) and COVID-19's impact (7 per-

> Mintert said when farmers were asked if make large investments, "people were not very optimistic about making investments in their farming operation, which is very unusual given the strong income situation.

> "A lot of it was related to these higher input costs," said Mintert. "People are concerned about other issues as well, but higher input costs really have people concerned.'

> Mintert said they had been receiving several reports from producers that "it had been a challenge to acquire the crop inputs for the 2022 season."

> "Across the board, there are serious input supply chain problems. Not every person has a problem, not every product is a problem, but this is unprecedented," said Mintert. "It's uncharted territory.'

> Tight machinery inventories continue to be a problem. In February, over 40 percent of producers stated that low farm machinery

> > See **SENTIMENT**, page E2

Indiana 2022 spring climate outlook

By HANS SCHMITZ

Purdue Extension

The big question for this spring revolves around how quickly Indiana can shrug off La Niña and return to El Niño-Southern Oscillation (ENSO) neutral conditions. Until that happens, the likelihood of a wet spring remains high. The national Climate Prediction Center (CPC) provided new guidance for the spring now that we are quickly approaching the beginning of the meteorological spring season.

Prominent in the latest guidance is a prediction of above-average precipitation over the eastern Corn Belt. On a map, the trend looks like a bullseye with Indiana in the center. Meanwhile, predictions for the eastern half of the United States are favoring above-average temperatures in March, April and May. This warmer, wetter, early-spring trend is associated with an extension of wintertime La Niña conditions, focusing the moisture on the front half of the three-month period.

Experts at the CPC say that regarding ENSO there is relative confidence that La Niña will remain in place throughout the spring, with a transition to EN-SO-neutral conditions beginning in May. With this transition, less predictability in the long-range forecasts exists and the possibility for the wet signature to fade increases towards the end of the planting season.

The warming signature, according to CPC, is trending two-thirds of a degree warmer than normal over the period, which does not seem like much. However, parsing that guidance a little further, the CPC gives Indiana a little less than 15 percent chance of having a top ten percent warmest spring, with only a five percent chance of a top ten percent coolest spring. In other words, Indiana has a one in seven chance of a very warm spring and a one in twenty chance of a very cool spring.

The wet signature varies across the state, with southern Indiana expected to have more extreme wetness than northern Indiana. The predicted anomaly is 1.35 inches above average in the south and 0.83 inches above average in the north. Once again, due to the La Niña, that deviation towards

See OUTLOOK, page E2

Farmland assessments will increase for taxes in 2023

By LARRY DEBOER Purdue University

Farmland property taxes have been falling. Total property taxes paid by agricultural property owners fell 2.3 percent per year from 2017 to 2021, mostly because of lower farmland assessed values.

But farmland prices are rising. A Purdue Agricultural Economics survey showed that average farmland selling prices increased 12.5 percent from 2020 to 2021. Eventually, farmland assessed values will rise

Assessments of houses are based on their selling prices, but that's not true for farmland. Farmland assessed values are based on a statewide base rate per acre, times a soil productivity factor, and for some acreage, minus an influence factor for characteristics such as frequent flooding.

Changes in the assessed value of farmland depend mostly on changes in the base rate. That's the dollar amount per acre established each year by the state's Department of Local Government Finance. It's calculated with a formula that divides rents and net farm income by an interest rate. The formula uses the calculations from six years and drops the highest, then averages the re-



maining five. For taxes in 2022, the formula as part of the net income calsix years were 2015 through 2020.

You can see the DLGF's calculations and all the data at www.in.gov/ dlgf. Click on Assessments in the menu to the left, then on Agricultural

Land Assessments. The base rate increased a lot between 2008 and 2015, rising from \$880 to \$2,050 per acre, because of the increase in corn and soybean That year the prices from 2015 will prices. They enter the numerator of be dropped, and the prices for 2021

culation. Commodity prices peaked in 2013 and began to fall. Eventually that reduced the base rate. It fell each year from 2015 to 2021. The base per acre.

rate for taxes in 2022 will be \$1,290 But commodity prices increased in 2021. The base rate formula will reflect that increase for taxes in 2023.

will be added. The DLGF's data shows the average price of corn in 2015 as \$3.86 per bushel. The average price in 2021 was \$4.93, 28 percent higher. Soybean prices were

higher too. Drop the old lower prices, add the new higher prices, run the formula, and the base rate of farmland rises

taxes in 2023. That's a 16 percent

increase.

The assessed value of farmland may not depend directly on farmland selling prices, but the same factors that influence the selling price also influence the base rate. Roughly speaking, selling prices and assessed values rise and fall together, with the base rate about two years behind.

The higher base rate means that tax bills for farmland owners will go up. If farmland assessments rise faster than other assessed values, farmers will pay a bigger share of total property tax revenue. There are complications, though. Indiana home values have been rising fast too, so the assessed values of homes will go up. That should offset part of the tax shift to farmers.

Taxable assessed values will rise faster than usual for 2022 taxes and likely keep increasing. A bigger tax base would increase the total revenues that local governments collect except that Indiana imposes a maximum levy and restricts the increase of the maximum each year. The "maximum levy growth quotient" is based on how fast incomes rise, and it will be 4.3 percent in 2022. About three-quarters of all Indiana local governments set their property from \$1,290 this year, to \$1,500 for tax levies at or near the maximum.

See TAXES, page E2



Meltzer Farm in Shelbyville

HISTORIC FARMS SOUGHT FOR RURAL PRESERVATION AWARD

Deadline is May 13

PROVIDED BY INDIANA LANDMARKS

Indiana Landmarks and Indiana Farm Bureau welcome nominations for the 2022 John ments. Arnold Award for Rural Preservation. The award recognizes the preservation and continued agricultural use of historic farm buildings in Indiana. Since it was established in preserved or adapted. 1992, owners of more than 30 historic farms all over the state have been honored with the and its preserved historic features. Historic

Anyone, including farm owners, can submit will be presented during the Celebration of ana Preservation magazine.

Agriculture at the Indiana State Fair in Au-

■ a brief history of the farm and description of its significant historic structures and features, such as the farmhouse, barns, agricultural outbuildings, and landscape ele- historic features of the rural landscape. The

■ a description of how the farm's historic agricultural structures are used in day-to-day farming operations, and how they have been ■ high-res digital photographs of the farm

images are also welcome. The award winner receives an attractive

a nomination for the Arnold Award, which outdoor marker and feature coverage in Indi-

Indiana Landmarks named the award gust. The nomination is simple and asks for: in memory of John Arnold (1955-1991), a Rush County farmer who successfully combined progressive agricultural practices with a deep respect for the natural and John Arnold Award for Rural Preservation honors those who share a similar commitment to preserving the landmarks and landscape of rural Indiana.

Submit nominations for the Arnold Award for Rural Preservation online at www.indiana landmarks.org/john-arnold-award-rural-pres ervation, or contact Tommy Kleckner at Indiana Landmarks, 812-232-4534, tkleckner@ indianalandmarks.org. Deadline for nominations is May 13, 2022.

TAXES

From page E1

Those governments can't increase their levies more than 4.3 percent, no matter what happens with assessment growth.

That means, if taxable assessed values grow faster than the maximum levy growth quotient, tax rates will fall. They won't fall enough to reduce the tax bills of farmland owners (or homeowners), but most farmland tax bills won't rise by the full 16 percent increase in the base

Most owners of business land, buildings and equipment will see their assessments rise less than farmland and homes. Their tax bills will increase less and could even fall.

Farmland values are increasing, and that means the era of falling farmland taxes is over. Come 2023, farmland property taxes are likely to

This article appeared on the Purdue Extension website.

OUTLOOK

From page E1

wetness is likely to be felt more greatly in March than in May. CPC guidance gives similar odds for wetness as temperatures. Indiana has a one in seven chance of a very wet spring and a one in twenty chance of a very dry spring.

As we look forward to getting outdoors and farmers begin to work ground, we may initially have limited windows where soils are dry enough to do anything, but those windows look to grow longer towards the end of the spring. For more information, please contact the Purdue Extension office in Posey County via hschmitz@purdue.edu or 812-838-1331.

SENTIMENT

From page E1

inventories are holding back their investment plans. While plans for and farm machinery parts. farm building and grain bin construction were more optimistic percent of corn and soybean propurchasing crop inputs from their Mintert. suppliers. In a follow-up question

ducers who said they experienced difficulty procuring inputs, herbicides are the most problematic in-

"To learn more about how crop producers are responding to surgthis month, 56 percent still said ing fertilizer prices, corn productheir plans for new construction ers were again asked if they plan are below the previous year. Thirty to change their nitrogen fertilizer application rate in 2022 compared ducers say they've had difficulty to the rate used in 2021," said

rate when surveyed in January.

posed to corn and soybean pro- this month's survey said they plan range from 5-10 percent, while 18 16 percent chose "poor quality" to use a lower nitrogen application percent expect their farm's annual rate this year than in 2021, com- growth rate to be less than 5 perpared to 37 percent of corn pro- cent. The need for better broadput to source followed by fertilizer ducers who said they planned to band coverage in rural areas has reduce their nitrogen application been highlighted in several legislative proposals at both the state Each winter, the barometer sur- and national levels. The February vey asks producers to project their barometer survey included a quesfarm's annual growth rate over the tion asking respondents to characnext 5 years. In 2022, 53 percent terize the quality of their farm's stated they either had no plans to internet access. Just three out grow or plan to retire/exit in the of ten respondents said they had next five years, 19 percent expect "high quality" internet access, 41

on the survey, while 12 percent stated that they did not have internet access at all. Responses to this question suggest that nearly three out of ten farms in this month's survey are unable to take advantage of many applications and services which require reasonable quality internet access.

For more information, visit https://purdue.ag/agbarometer.

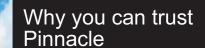
Rob Burgess, Wabash Plain Dealer editor, may be reached by email at rburgess@wabashplaindealer.com.



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To the F



By ELIZABETH K. GARDNER

ekgardner@purdue.edu

African swine fever, a highly contagious swine disease, is in the Domininfect people, but it can wipe out pork production in a region. Quick identification and containment are key to stopping its spread, and a team of Purdue from African swine fever." University researchers are developing a rapid, pen-side test for the disease.

The National Animal Health Laboratory Network and the National Animal Disease Preparedness and Response Program has provided \$1 million to Mohit Verma, assistant professor of agricultural and biological engineering at Purdue, for the project.

"A rapid test that can be done in the ratory Disease. field is needed for surveillance and di-"When it hit China a few years ago, it indicate results through an easy-to-see wiped out 50 percent of the country's pig population. It is a devastating discontaining it."

The research funding was included in the U.S. Farm Bill to build up the nation's ability to quickly detect and respond to high-consequence diseases.

"This was the first time to my knowlican Republic. The disease does not edge that a joint operation between these two organizations was included in the farm bill," Verma said. "It shows how seriously the U.S. is taking the risk

> Verma is collaborating with Purdue scientists Darryl Ragland, associate professor of veterinary medicine, and Jonathan Alex Pasternak, an assistant professor of animal sciences, to create a portable paper-strip test for the disease. The project follows in the footsteps of Verma's success developing similar tests for COVID-19 and Bovine Respi-

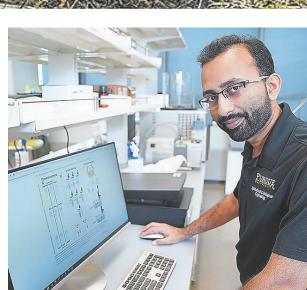
"We're working on a test that will agnosis of African swine fever," he said. detect the virus within 30 minutes and color change on a paper strip," Verma said. "The ease of use, test timing and ease, and hours, even minutes, matter in size are similar to those of an at-home pregnancy test or COVID-19 test."

A saliva or blood sample will be used for the test. Within a cartridge, the sample is mixed with primers and reagents developed by the team and gently heated. The included paper strip then changes colors if African swine fever DNA is present, he said.

'We want the test to be easy for farmers and veterinarians, and for the pigs," Verma said. "Our hope is to create something affordable and accessible that could be broadly used in the U.S. and throughout the world."

The technology tests for DNA from the virus and uses a method of nucleic acid amplification called loop-mediated isothermal amplification, or LAMP. When the viral DNA is present, LAMP amplifies it. As the level of nucleic acid increases, it changes the pH of the assay, which triggers the color change on the paper strip.

The advantage of LAMP over other methods is that it does not require extraction and processing of the samples, which can be lengthy and expensive, Verma said.



Purdue University photo / Tom Campbell

TOP: Pigs on a farm. Purdue University researchers are developing tools to help prevent and detect African Swine Fever. ABOVE: Mohit Verma, professor of agricultural and biological engineering in Purdue University's College of Agriculture, works in his lab. Verma successfully developed an on-site bovine respiratory disease test.



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SMALL BUSINESS PARTNERSHIP GROWING SUPPORT FOR INDIANA AGRIBUSINESSES

PROVIDED BY INDIANA **ECONOMIC DEVELOPMENT CORPORATION**

INDIANAPOLIS — The Indiana Small Business Development Center (SBDC), Purdue Center for Regional Development (PCRD), Purdue Extension, and the Indiana State Department of Agriculture (ISDA) today announced a partnership to launch the Agribusiness Initiative.

The Indiana SBDC Agribusiness Initiative offers Hoosier small businesses and entrepreneurs in the agriculture sector access to nocost, confidential specialty business advising and training, including financing, crop yield projections, U.S. Department of Agriculture loan packaging, value-added product development, and commodity exporting, among others. These businesses range from producers and processors of agricultural commodities to manufacturers of value-added products, machinery, technology and hardwoods.

"Small business development is big business for the state of Indiana," said David Watkins, Indiana SBDC state director and Indiana Economic Development Corporation vice president of small business. "Entrepreneurs and small businesses are fundamental to the future growth and sustainability of communities across the state, and this partnership will focus on providing small Hoosier agribusinesses with the tools, resources and training they need to start, grow and

Agriculture is a vital component to Indiana's economic health, contributing an estimated \$31.2 billion to Indiana's economy each year. With more than 15 million acres of farmland. Indiana supports more than 94,000 Hoosier farmers and is a leading producer of corn, soybeans, hogs, poultry, popcorn and tomato products. Indiana's agricultural excellence is also driving exploration, experimentation and innovation as farmers and scientists work together to provide cutting-edge research that promises to move the global agriculture industry into the future.

"Over the past few decades, the needs of Hoosier agribusinesses have rapidly evolved," said Bruce Kettler, director of the Indiana State Department of Agriculture. "This initiative recognizes the critical role agribusinesses, supply networks and distribution channels play in helping to ensure a strong Indiana economy.'

In addition to business advising and training provided by the Indiana SBDC, PCRD will provide administrative support, with additional advising services from Purdue Extension and ISDA. Former Hoosier Heartland Indiana SBDC



Regional Director Monty Henderson will serve as director for the Agribusiness Initiative. Indiana agribusinesses are encouraged to learn more about and register for the program online.

"Entrepreneurs are vital because they create new jobs, new wealth and new growth," said Jason Henderson, senior associate dean and director of Extension at Purdue University. "The partnership behind the Agribusiness Initiative is a way to leverage the Extension network to connect and support entrepreneurs in every Indiana county, with resources at Purdue and beyond, to build stronger economic engines in the agribusiness industry."

With its consistent leading-edge agribusiness and agtech activity, PCRD, which currently hosts two of Indiana SBDC's regional offices, will host the new Agribusiness Initiative. The combined expertise, research and outreach efforts of PCRD and Extension complement the Agribusiness Initiative and help drive the Indiana SBDC's goals to better serve developing agribusinesses and farms by employing and securing agricultural professionals to help bridge the advising gap.

About Indiana SBDC

The Indiana Small Busi-

gram of the Indiana Economic Development Corporation, which leads the state of Indiana's economic development efforts. The Indiana SBDC helps entrepreneurs and small businesses start, grow, finance, innovate, and transition through no-cost, confidential business advising and training. With a network of 10 regional offices through the state, the Indiana SBDC creates a positive and measurable impact on the formation, growth and sustainability of Indiana's small businesses.

The Indiana SBDC is funded, in part, through a Cooperative Agreement with the U.S. Small Business Administration. All opinions, conclusions, and/or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the SBA. For more information about the Indiana SBDC, visit isbdc.org.

About Purdue Center for Regional **Development (PCRD)**

PCRD seeks to pioneer new ideas and strategies that contribute to regional collaboration, innovation and prosperity. Founded in 2005, the Center partners with public, private, nonprofit and philanthropic organizations to identify and enhance ness Development Center the key drivers of innova-

(Indiana SBDC) is a pro- tion in regions across Indiana, the U.S. and beyond. These drivers include a vibrant and inclusive civic leadership, a commitment to collaboration, and the application of advanced data support systems to promote sound decision-making and the pursuit of economic development investments that build on the competitive assets of regions. Learn more at pcrd.purdue.edu.

Indiana State Department of Agriculture (ISDA)

The Indiana State Department of Agriculture (ISDA) was established as a separate state agency by the Legislature in 2005. Administratively, ISDA reports to Lt. Governor Suzanne Crouch, who also serves as Indiana's Secretary of Agriculture and Rural Development. Major responsibilities include advocacy for Indiana agriculture at the local, state and federal level, managing soil conservation programs, promoting economic development and agricultural innovation, serving as a regulatory ombudsman for agricultural businesses. and licensing grain firms throughout the state.

State Dept. of Agriculture receives \$500K grant to support mental health

By REGAN HERR

Indiana State Dept. of Ag

INDIANAPOLIS — The from the United States Deand Ranch Stress Assistance Network (FRSAN) Program. Indiana Rural Health Association (IRHA) and Purdue Extension to reduce mental individuals engaged in agriculture-related occupations to existing stress assistance programs.

"The agricultural community is an extraordinary one and unique challenges, both economically and socially," said Lt. Gov. Suzanne Crouch, Secretary of Agriculture and Rural Develassist rural residents with ensure residents know there are available resources help close to home."

the IRHA to help those who live and work in agriculture to become more com-23 community workshops across Indiana. Conversations about mental health stigma and resources, as well as recognizing signs of those in mental health disa list of regional meetings and locations, please visit indianaruralhealth.org.

with lots of farming and agricultural bases in many towns Department of Agriculture. and cities. Our statewide workshops will work to pro- in their job and in their life, vide these communities the and rural communities are tools they need to recognize no different. I am hopeful stress, related mental health this project will highlight issues and mental health cri- resources for their stress and ses that unfortunately can any mental difficulties they lead to suicide attempts," said may face."

Kathy Walker, Program Director, Indiana Rural Heath Association. "Our workshops will provide skills to help Indiana State Department everyone recognize signs of of Agriculture (ISDA) has distress. Indiana Rural Health received a \$500,000 grant Association works to enhance the health and well-being of partment of Agriculture Na- rural Hoosiers through leadtional Institute for Food and ership, education, advocacy, Agriculture's (NIFA) Farm collaboration and resource development."

To supplement these ac-ISDA is partnering with the tivities, Purdue Extension will also survey and analyze the mental health call center landscape and capacity in health stigma and connect Indiana and then create and deploy a specialized training module for mental health call center workers supporting farmers, farm families and agribusinesses.

"COVID, the breakdown with hard working people of agricultural supply chains, price volatility and variable weather are just a few issues that have intensified the need for stronger supports for our farmers and agribusiness colopment. "This funding will leagues in times of stress," said Dr. Jason Henderson, stress and help communities Director of Purdue Extension. "Purdue Extension is excited to partner with ISDA and IRHA on this project to fo-ISDA will be working with cus on resources and tools to support farm families through these difficult times."

Together ISDA, IRHA and fortable with mental health Purdue Extension will highcare options by holding light the importance of mental health care through broad promotions. This will include creating mental health promotional materials and visual reminders for the farming community that will be shared at tress will be discussed. For events across Indiana, such as the Indiana State Fair.

"Farming is one of the most dangerous and stressful jobs "Indiana is a very rural state there is," said Bruce Kettler, director of the Indiana State "Each person faces stressors





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By STEVE MARTIN

sgmartin@prf.org

Abuse and Alcoholism.

Researchers in Purdue der." University's College of people affected by AUD. oxycodeine. The research was published nal Frontiers in Pharmacol-

dicinal chemistry and momacy, leads the research macology." program with Susruta Maministrative sciences in the to treat AUD. University of Health and Sciences & Pharmacy in any potential off-target St. Louis. Van Rijn said the effects. Kratom alkaloids compounds are based on may interact with multiple alkaloids found in the plant nonopioid receptors, so Mitragyna speciosa, or improving the current molkratom. These compounds ecule series to limit those could treat AUD and have interactions would make less abuse potential than the molecule safer," Van opium-derived opioids.

duce alcohol intake," Van brain."

Rijn said. "We used mouse models of alcohol use and assessment of adverse ef-WEST LAFAYETTE — fects, including monitoring The 2019 National Survey for seizures or hyperactivon Drug Use and Health ity. Our synthesized comreported that 14.5 million pound does not display adpeople ages 12 and older verse effects observed with have alcohol use disorder, other kratom alkaloids, or AUD. This represents including abuse potential, 5.3 percent of that popula- hyperactivity and seizures. tion, according to the Na- As such, this molecule may tional Institute on Alcohol have utility in humans in treating alcohol use disor-

Alkaloids found within Pharmacy, the Purdue In- kratom, Van Rijn said, are stitute for Drug Discovery considered less problemand Washington Universi- atic than synthetic opioids ty in St. Louis are synthe- or opium-derived opioids sizing compounds to treat like fentanyl, morphine and

"The U.S. Drug Enin the peer-reviewed jour- forcement Agency has not scheduled kratom as a substance of abuse," he said. Richard Van Rijn, adjunct "More research is needed associate professor of me- to properly establish this, but one hypothesis for their lecular pharmacology in lower risk for abuse is re-Purdue's College of Phar- lated to their cellular phar-

Still, Van Rijn said, severjumdar, associate professor al steps are needed to furof pharmaceutical and ad- ther develop the compound Research Foundation Office

> "We will look to reduce Rijn said.

curring kratom alkaloid half life of the drug, how speciogynine, which has it is metabolized and how



Arryn Blaine, a doctoral candidate in Purdue University's College of Pharmacy, conducts research in Richard Van Rijn's laboratory on compounds that may be able to treat alcohol use disorder. The compounds are based on alkaloids found in the kratom plant.

filed by the co-owner, University of Health Science compound should contact of Technology Commercialization at aghosh@prf.org about 2022-VANR-69644.

About Purdue Research Foundation Office of Technology Commercialization

The Purdue Research Foundation Office of Tech-"We can synthesize a de- "We also need to conduct nology Commercialization rivative of the natural-oc- studies to determine the operates one of the most comprehensive technology transfer programs among superior potency to re- much is getting into the leading research universities in the U.S. Services

Park District at Purdue, ad- Award for Place from the information.

A provisional patent appli- provided by this office sup- jacent to the Purdue cam- Association of Public and cation on the research was port the economic develop- pus. In fiscal year 2020, the Land-grant Universities. In ment initiatives of Purdue office reported 148 deals 2020, IPWatchdog Institute University and benefit the finalized with 225 tech-ranked Purdue third na-& Pharmacy in St. Louis. university's academic ac- nologies signed, 408 dis- tionally in startup creation Industry leaders looking tivities through commer-closures received and 180 and in the top 20 for patto develop or license the cializing, licensing and issued U.S. patents. The ofprotecting Purdue intellec- fice is managed by the Pur-Annie Ghosh of the Purdue tual property. The office is due Research Foundation, nonprofit foundation creathoused in the Convergence which received the 2019 ed to advance the mission Center for Innovation and Innovation and Econom- of Purdue University. Con-Collaboration in Discovery ic Prosperity Universities tact otcip@prf.org for more

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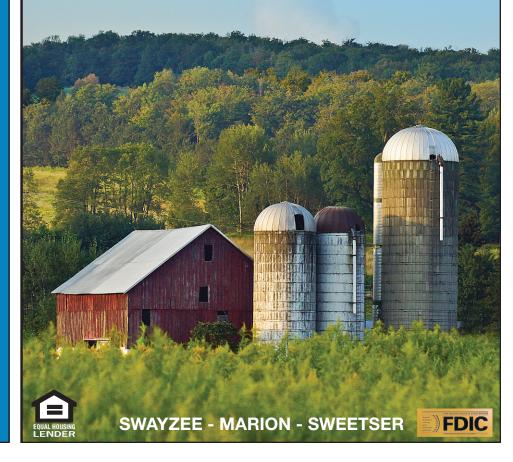
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Photos by BRETT STOVER / bstover@h-ponline.

Justin Miller and Amber Broxon prepare to plant new produce at the BroxonBerry farm on March 9

BroxonBerry farm provides local produce

By BRETT STOVER bstover@h-ponline.com

In 2016, Amber Broxon quit her full time job as a manager at Pizza Hut in order to pursue a completely different career – as a strawberry farmer.

"When we originally started, the dream was to be a strawberry farmer because I love strawberries," Broxon said. "I think they are just gorgeous, and they tasted amazing, way better than anything that you can get out of the store. So I decided, 'I'm going to be a

strawberry farmer.' However, not everything went according to plan. She called the

first year a "failure." "I quickly found that you can't make a living out of selling strawberries because they are very seasonal here," Broxon said. "So we started growing lettuce and tomatoes, anything that you can think

Rather than give up and go back to the 9-5 life, Broxon doubled down and began to research better farming practices.

"It was a struggle. There were tears, but I took that as a sign to learn about things because if you plant it, they will come," Broxon said. "I planted a bunch of pumpkins. Everybody likes pumpkins, but there's a lot more that goes into it than planting it and watching it grow. We got devastated by a bunch of cucumber beetles and squash bugs. I cried, and I went and learned all about how to take care of them without using pesticides and herbicides.'

Now, six years after that decision, Broxon and her husband - Justin Miller, who quit his job to help out last year - own and operate the BroxonBerry farm in

It's a small farm, roughly threefourths of an acre, but the varieties of products have grown over that time, from strawberries to dozens of different items including melons, tomatoes, greens and more. They even have a number of chickens and sell eggs.

The farm has grown "methodically" over the years, Miller said. They don't want to take on too much all at once, or to set unreal-

istic goals. "We can't take on too much and



Amber Broxon started the BroxonBerry farm in 2016. Today, the farm provides produce to multiple regional companies.



Justin Miller quit his job last year to work full time on the farm.

said. "The last thing we want to do model is consistency. They rely on

overextend ourselves and find our- is tell somebody, 'Hey, sorry. We selves in the position where we are actually don't have that this week,' no longer able to support," Miller because a big part of our business

consistency."

For Broxon and Miller, it's about the quality, not quantity, of food. "It was a mission of ours from the

very beginning, so we wanted to do it all without [pesticides]," Miller said. "We didn't eat that kind of stuff, so we didn't want to grow that kind of stuff and make other people have to eat it... We just decided that we were going to try to build the whole thing and do it without any of that stuff.'

The BroxonBerry farm is "Certified Naturally Grown," Broxon said. CNG farms are an alternative to the United States Department of Agriculture's National Organic Program, with a process that is aimed at helping certifying smaller farms like BroxonBerry.

"You actually get audited," Miller said. "An inspector comes to the farm and does a whole audit of the farm to make sure you're following along with the practices that need to be done with all that and everything. We picked that certification up a few years ago."

Miller and Broxon preferred to eat organic food in their own home, so it made sense for them to make their produce organic as well. Beyond that, Miller said he

See **BROXONBERRY**, page F4



the ripple effects of the COVID-19 pandemic. The human health crisis that arose during the pandemic affected all aspects of life, as affecting the global supply chain, including rain and longer dry periods. the availability of food.

could play out as a result of climate change. weather events that pose unique challenges The agricultural sector could face considerable challenges in the years to come. The Fourth National Climate Assessment is a Scientists notes that many agricultural regovernment-mandated report that must be gions of the United States have already ex-

Climate change poses an array of challeng- every four years. Among the many aims of flooding on the agricultural sector are often ifornia, the Great Plains and the midwest. Administration notes that the impacts of effects of global changes on the natural en-100 years. The most recent report, delivered ultimately, consumers' dinner tables. in 2018, noted that changing precipitation patterns could intensify in the coming years, Drought Information System reports that the The UCS notes that farmers may be forced illnesses limited worker productivity, thus leading to more intense periods of heavy

Those shifting patterns and other changes Scientists warn that a similar scenario could lead to an increase in conditions and to the agricultural sector.

■ Flooding: The Union of Concerned delivered to the United States Congress once perienced increased flooding. The effects of has already dealt with severe drought in Cal-the years ahead.

es. The National Oceanic and Atmospheric the report are to provide an analysis of the devastating and include accelerated soil Depleted water supplies are a byproduct of erosion, water pollution and damage to inclimate change on various sectors of society vironment and agriculture. The report also frastructure that challenges farmers' ability on crops and livestock. are interrelated, a connection that mirrors must project major trends for the next 25 to to get food from their farms to stores and,

■ Drought: The National Integrated primary direct economic impact of drought to choose crop varieties and animal breeds in the agricultural sector is crop failure and that are suited to the new conditions sparked pasture losses. The Government of Canada notes that areas of western Canada are tion could force farmers to make potentially already experiencing frequent and severe costly investments in machinery and other droughts, and scientists expect other areas of changes as they make the transition. the country to be affected by drought more for the United States, which the UCS notes farmers to make some difficult decisions in

drought, and such depletion can take a toll

■ Economics: The effects of climate change on crops and livestock may force farmers to change the nature of their farms. by climate change. Going in a new direc-

Climate change will pose unique challengoften in the years to come. The same goes es to the agricultural sector that could force





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HOW AGRICULTURAL TECHNOLOGY CAN HELP IMPROVE SUSTAINABILITY

tainable agriculture.

alition, sustainable agriculcompromising future generations' ability to meet their own needs. That's a worthy goal, especially in the face of a growing global population ers' ability to do the same. that the United Nations estimates will increase by two billion persons by 2050.

efits to utilizing sustainable agriculture technology, which can be especially ad-

Efficient land management

Modeling technologies can be utilized to make more efficient use of land. According to Sustainable Brands, a global community of brand innovators, modeling tech-

Sustainable agriculture is nologies can be employed in an approach to farming that a host of ways, including to will allow modern farmers to identify tillage practices and meet the needs of a growing the status of tile drainage. population while enhancing Certain agricultural technolenvironmental quality. That ogies have been designed to can benefit both current and predict the performance of future generations, and tech- cropland, which can allow nology will play a vital role farmers to more effectively in realizing the goals of sus- and efficiently use their land. Farmers also can employ According to the National modeling technologies to de-Sustainable Agriculture Co-termine soil health and water needs and usage, which can ture is designed to meet the benefit the land and ensure needs of the present without resources aren't wasted. Utilization of such technologies ensures farmers can meet the needs of modern consumers without affecting future farm-

Reduce runoff

The United States Environ-There are numerous ben- mental Protection Agency notes that runoff poses a significant threat to the environnotes that nanotechnology is an efficient way to deliver nutrients to crops that can improve both the efficacy of the technologies can help modnutrients and reduce runoff.

Protect crops

Sustainable Brands notes ulation.



that agricultural biologicals are inputs derived from natural materials that have low toxicity. That low toxicity reduces their environmental impact. Agricultural biologicals utiment. When runoff occurs, lize the properties of such vantageous to modern farm- fertilizer, bacteria and other things as bacteria, fungi pollutants find their way into and even insects to support streams, rivers, lakes, and the healthy crops, potentially ocean. Sustainable Brands improving yield without adversely affecting the environment.

Sustainable agriculture ern farmers and their successors meet the needs of a rapidly growing global pop-



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Photos by BRETT STOVER / bstover@h-ponline.com The BroxonBerry farm is located at 5359 W. 700 N. in Markle, Indi-

BROXONBERRY

From page F1

thinks that locally-grown food is "fresher, it tastes better, and it's consistent."

"You can plan on it more easily. The couple at the grocery store that we deal with in Fort Wayne, they love what we are going to have that week - and then on it," Miller said. "Oftentimes it's been picked within a day. Some of the things we pick that morning, package it right up and take it straight to them. I mean, it doesn't get much fresher than that."

The farm supplies multiple regional businesses with products, Broxon said, including 3 Rivers Natural Grocery Food Co-op & Deli in Fort Wayne, Ginger Fresh Market in Ossian and Chapman Brewing Company in Huntington, as well as other specialty product companies as well. Additionally, the farm is open seven days a week for customers to walk in and purchase items that are available in season.

With the COVID-19 pandemic and subsequent supply chain-related concerns causing shipping delays around the United States, the availability of local produce has become more crucial.

"The last couple of years have shown how distribution systems and all that stuff, it can break down

very easily," Miller said. "When everything was shut down in the spring of 2020 and even today with shipping delays and whatever, it has caused people to look inward more and get things more locally sourced. With our business model being so small and local, it has insulated us and the comthe fact that we tell them munity a little bit from the have and then on Thursday have the stuff shipped in from California or Mexico a half hour drive away from ers to try their hand at growdelivering it to the grocery store."

> The work has been "rewarding,"

Greenhouses allow Amber Broxton and Justin Miller to grow food even when the temperature drops. or Guatemala or wherever land, and going "against the Thursday we show up with it may be when we are only grain," will encourage oth-

> "Most people think it takes Miller said. 50, 60 acres to even do any-

ing food at home, even just

for themselves.

on Monday this is what we disturbances of having to Broxon hopes that their thing in farming. That's not in your backyard," Broxon We just want people to unsuccess in growing food on true. You can feed your- said. "I'm not saying we are derstand that - and get closa relatively small plot of self just on a small garden trying to start a movement. er with their food."



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INDIANA FARM BUREAU ACCEPTING **APPLICATIONS FOR 2022 YOUNG FARMERS** & AG PROFESSIONALS AWARDS



PROVIDED BY INDIANA FARM BUREAU

Indiana Farm Bureau is now accepting applications for its 2022 Young Farmers & Ag Professionals awards. Each year, INFB recognizes farmers and agricultural professionals who are members between the ages of 18 and 35 with the Achievement and Excellence in Agriculture awards.

The Achievement Award recognizes young INFB members who earn the majority of their income from production agriculture and are judged on their leadership involvement and farm management techniques. The Excellence in Agriculture Award honors members who do not derive the majority of their income from an owned, production agriculture operation, but who actively contribute and grow their involvement in Farm Bureau and agriculture.

Winners and runners-up for both awards are eligible for cash prizes. The winners also will receive an all-expenses-paid trip to org/yfapawards.

the American Farm Bureau Federation's 2023 convention in San Juan, Puerto Rico, Jan. 6-11.

The winner of the Achievement Award will receive a \$11,000 cash prize, courtesy of Bane Welker Equipment and Indiana Farm Bureau Insurance, as well as the David L. Leising Memorial Award. The Excellence in Agriculture Award winner will receive \$11,000 cash prize, courtesy of Farm Credit Mid-America and Indiana Farm Bureau Insurance.

Runners-up for both awards receive a \$1,000 cash prize from Indiana Farm Bureau Insurance.

Eligible applicants must be voting members of INFB between the ages of 18 and 35 as of Jan. 31, 2023 and must also be Indiana residents.

Candidates must submit their applications via the online portal no later than May 1 at 11:59 p.m. EST. Scanned or emailed entries will not be accepted. Finalists will be announced in August.

For additional information and application guidelines, visit infb.

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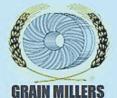
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- 12" overhang on all sides
- 1/4" insulation on roof

40' x 64' x 14'

- 6x6 solid treated posts
- Trusses 48" 0.C.
- 29 guage metal roof and siding
- 1-walk door
- 1-20' x 14' split sliding door

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- 12" overhang on all sides
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- 29 guage metal roof and siding
- 1-walk door
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Contact Store For Pricing

- 12" overhang on eaves
- 12" overhang on all sides
- 1/4" insulation on roof 60' x 120' x 14'
- 6x6 solid treated posts
- Trusses 48" O.C.
- 29 guage metal roof and siding
- 1-walk door
- 1-20' x 12'-6" split sliding door
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- 12" overhang on eaves
- 12" overhang on all sides
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